

**J.J. van Aartsen (\*) - C. Bogi (\*\*)**

*ANEKES GITTENBERGERI* AND *ANEKES NOFRONII*, TWO NEW  
GASTROPODS FROM THE MEDITERRANEAN. (\*\*\*)

Key Words: Gastropoda, Archaeogastropoda, Skeneidae, Mediterranean.

**Summary**

Two new recent microscopic shells from the Mediterranean are described, both belong to the genus *Anekes* BOUCHET & WARÈN, 1979.

**Riassunto**

Vengono descritte come nuove specie due microscopiche conchiglie mediterranee. Entrambe appartengono al genere *Anekes* BOUCHET & WARÈN, 1979.

Ongoing research of dredged material from the Mediterranean, time and again shows new species. In the present article we concentrate our attention on two different species of micromollusca. These small species (less than 1 mm in their largest dimension) apparently were not described before.

They evidently belong to that difficult and puzzling group usually indicated by such names as *Skenea*, *Cyclostrema*, *Dikoleps* etc. From the shells alone, the correct genus cannot be decided with certainty. On conchological grounds, however, there is much analogy with *Anekes undilisculpta* BOUCHET & WARÈN (1979: 221, 222 fig. 9C-E) the genus *Anekes* being founded by the same authors for this species alone. This high arctic species is also very small (about 0.6 mm) but has a different type of sculpture than our species. In fact, one of our two species even has nearly completely smooth whorls. Nevertheless we feel that the best course of action is to place both species described herein in the genus *Anekes* BOUCHET & WARÈN, 1979.

It is to be noted that the Neozealandic genus *Lissotesta* and especially the species *Lissotesta beta* LAWS, 1939 as described and figured by that author (LAWS, 1939: 479 pl. 64 fig. 37) show much analogy.

Still, in view of the rather great geographic distance, we prefer the (north) European *Anekes*.

The descriptions of our species are as follows.

\* Adm. Helfrichlaan 33, 6952 GB Dieren, Netherlands

\*\* Via delle Viole 7, 57100 Livorno, Italy

\*\*\* Lavoro accettato il 29 novembre 1987

*Anekes gittenbergeri* (fig. 1-2)

Shell trochoid, about 20 percent higher than broad, with about 2.5 rather convex whorls. The mouth is entire, without any sign of a siphonal notch or channel and is attached to the bodywhorl for only a minor part of the circumference. All teleoconch whorls are spirally striated and a somewhat more conspicuous spiral encircles the well-developed umbilicus. The last whorl occupies about 0.75 of the total height. The form of the clearly tilted protoconch, consisting of about half a smooth whorl, differentiates this species from many other Skeneidae.

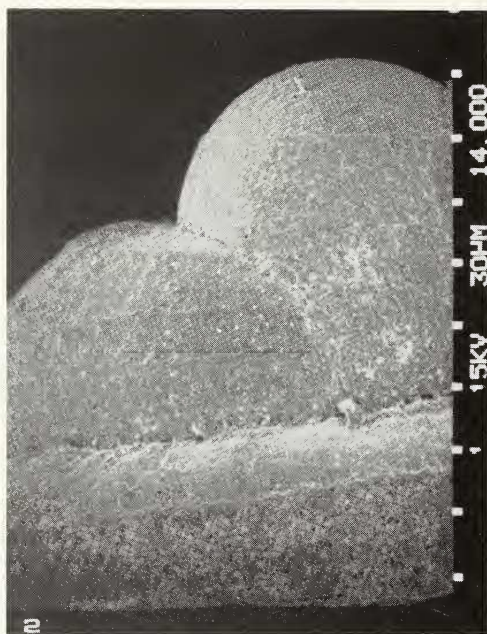


Fig. 1 - *Anekes gittenbergeri* n. sp., holotype, from Central Tyrrhenian Sea (200 m) - 0.6 mm.  
Fig. 2 - *Anekes gittenbergeri* n. sp., holotype, same spec., detail of the protoconch.

HEIGHT: 0.5 - 0.6 mm, breadth: 0.45 - 0.55 mm.

HOLOTYPE: Central Tyrrhenian Sea (RMNH Leiden, no. 55981) from detritus dredged at 200 m deep.

PARATYPES: Central Tyrrhenian Sea, same locality: 14 spec. (AD 14000), halfway between Corsica and Capraia (150 m) 1 spec. (AD 12612), Isola Ferro (Sardinia) (50 - 70 m) 1 spec. (AD 15982), between Capraia and Corsica (150 m) 1 spec. (AD 12553), Monaco (France) (100 - 200 m) 25 spec. + fragments (AD 19605) and 5 spec. (RMNHL, no. 55982) from the same locality, Capo Spartivento (400 m) 1 spec. (Coll. Bogi), S.T. Gallura (150 m) 2 spec. (Coll. Bogi), Capraia (400 m) 2 spec. (Coll. Di Paco).

*Anekes gittenbergeri* differ from *Cingulopsis fulgida* (ADAMS, 1797), *Cingulopsis pumila* (MONTEROSATO, 1884) and related species not only by its spiral sculpture and its lack of any colour, but, more important, by its totally different protoconch.

For the same reason *A. gittenbergeri* cannot be confused with juvenile *Rissoidea* of *Skeneidae* as found in European waters.

This species is named after prof. dr. E. Gittenberger, well-known dutch malacologist and good friend of the senior author.

The second new species, clearly belonging to the same genus, is:

### *Anekes nofronii* (fig. 3-4-5)

Shell trochoid, somewhat depressed, about ten percent broader than high, with about 1,5 rather convex, nearly smooth whorls showing very fine spiral sculpture at high magnifications. The mouth is entire with no siphonal notch and is attached to the bodywhorl for only a small part of its circumference. There is a well-marked umbilicus, encircled by one or a few spiral ribs on the base of the bodywhorl. Otherwise the whorls are nearly completely smooth. The last whorl occupies about 4/5 of the total height. The clearly tilted protoconch is very similar to the protoconch of *Anekes gittenbergeri* and consist of 1-1/4 whorl.



Fig. 3 - *Anekes nofronii* n. sp., holotype, from Alboran Sea (160 m) - 0.5 mm.

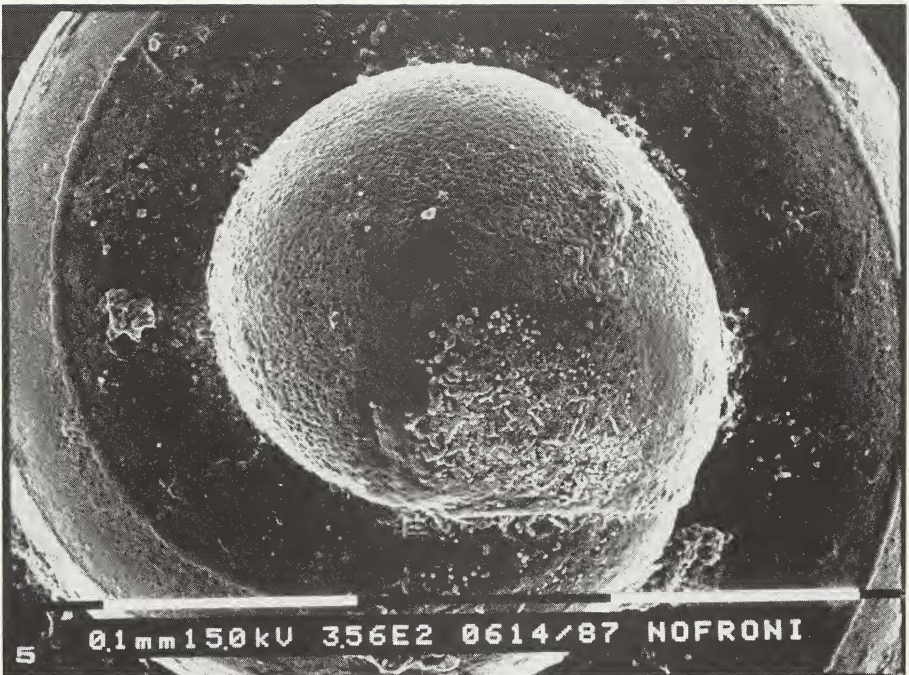
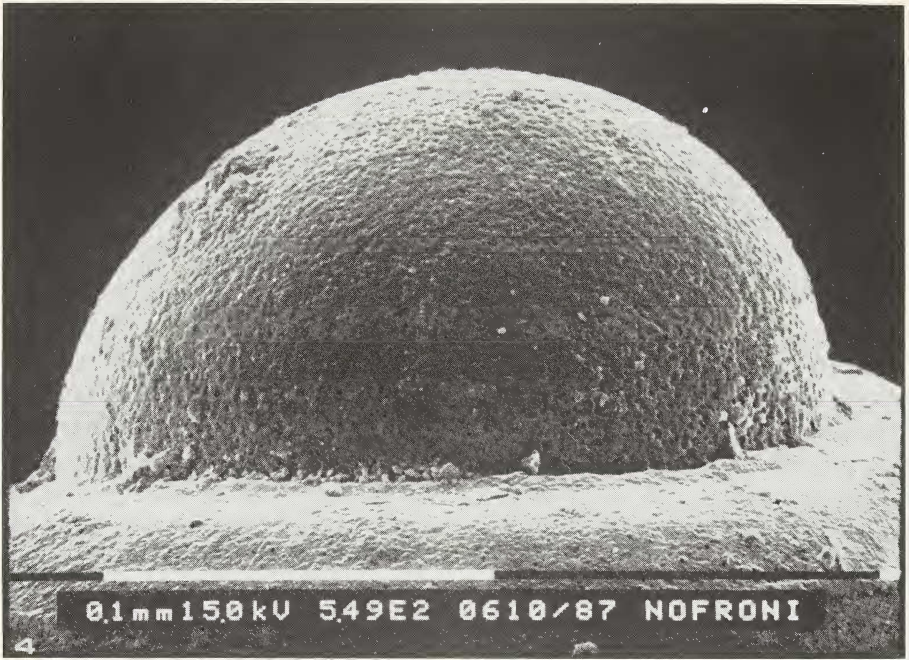


Fig. 4 - *Anekes nofronii* n. sp., holotype, detail of the protoconch.  
Fig. 5 - *Anekes nofronii* n. sp., holotype, detail of the protoconch.

HEIGHT: 0.45 - 0.55 mm, breadth: 0.55 - 0.65 mm.

HOLOTYPE: Alboran Sea (Museo di Bologna no. 007051) from detritus dredged at 160 m deep.

PARATYPES: Tyrrhenian Sea/Sardinia K2 (100-200 m deep) 4 spec. (AD 12165), between Capraia and Corsica (150 m) 2 spec. (AD 12574 A), Monaco (France, 100-200 m) 10 spec. fragments (AD 19604) and 2 spec. (RMNHL, no. 55983), Capo Passero (Sicily) 1 spec. (AD 17113), Alboran Sea (160 m) 4 spec. (Coll. Bogi), S.T. Gallura (150 m) 1 spec. (Coll. Bogi).

This species is named after prof. Italo Nofroni, well-known Italian malacologist and good friend to both authors.

*Anekes nofronii* resembles very much *Anekes gittenbergeri*, but differs from that species in being broader than high and thus possessing a more depressed shape as well as in having all teleoconch whorls, except the base, nearly completely smooth.

Interestingly the species *A. nofronii* could be easily confused with "*Trochus*" *minutulus* JEFFREYS, 1883.

This species, which is clearly not a *Trochus*, however, is two to three times as big. The figure by Jeffreys (1883: 95, pl. 20 fig. 2) is very bad and does not at all show the species well. Study of the syntypes in USNM 179752 (2 shells) shows that the whorls are much more convex than suggested in the figure and that there is no spiral surrounding the umbilicus, but rather a peculiar kind of rib running along the inside of the umbilicus, as mentioned by WARÉN (1980: 17). We tend to agree with MARSHALL (1916: 88) who suggests the identity of *Trochus minutulus* JEFFREYS, 1883 and *Rissoa (Setia) triangularis* WATSON, 1886. MARSHALL (loc. cit.) writes: "... *R. triangularis* WATSON, a minute shell, by the way, that must have puzzled Gwyn JEFFREYS, as he described it in the "Porcupine" Report as a *Trochus (minutulus)*, but from an examination of specimens, figures, and text, I am satisfied they are one and the same species".

We entirely agree with this conclusion and add that the figure given by WATSON (1886: 611, pl. 46 fig. 2) is a much better representation of "*Trochus*" *minutulus* JEFFREYS, 1883. As we were not able to make SEM photographs of the embryonic whorls of the two syntypes, we are not sure that "*T*" *minutulus* shows the same, characteristic type of tilted protoconch.

Note that the protoconch of both *A. gittenbergeri* n. sp. and *A. nofronii* n. sp. has some resemblance to the figures of *Cyclostrema solutum* DI GERONIMO (1974: 148, Tav. 1 figs 3,4) which is equal to *Cyclostrema minutum* JEFFREYS, 1883 which is equal to *Firolloidea desmaresti* LESUEUR, 1817, as already mentioned by van AARTSEN (1985: 12) and by NOFRONI (1984).

A closely related species was described by JANSSEN (1967: 124) from the Miocene of Germany. Although a study of some specimens showed this *Skenea minuta* JANSSEN, 1967 to be different from the two species here described, the protoconch is clearly the same, as is also evident from JANSSEN's figures (1967: pl. 2 figs 3-4).

Many thanks to Prof. Bruno Sabelli, University of Bologna, who made the SEM photographs of *A. nofronii*.

## REFERENCES

- AARTSEN, J.J. VAN, 1985. Complementary notes on recent articles about Mediterranean conchology. - *La Conchiglia* **17** (190, 191): 12.
- BOUCHET, Ph. & A. WARÈN, 1979. The abyssal Molluscan fauna of the Norwegian Sea and its relation to other faunas. - *Sarsia* **64**: 211-243.
- DI GERONIMO, I., 1974. Molluschi bentonici in sedimenti recenti batiali e abissali dello Ionio. *Conchiglie* **10** (7, 8): 133-172.
- JANSSEN, A.W., 1967. Beiträge zur Kenntnis des Miocäns von Dingden und seiner Molluskenfauna I. - *Geol. et Palaeontologica* **1**: 115-173.
- JEFFREYS, J.G., 1883. On the Mollusca procured during the Lightning and Porcupine expeditions. Part VI. - *Proc. zool. Soc. Lond.* 1883: 88-115.
- LAWS, C.R., 1939. The Molluscan Faunule at Pakaurangi Point, Kaipara. No. 1. - *Trans. Proc. Roy. Soc. New Zealand* **68**: 466-503.
- MARSHALL, J.T., 1916. Supplement: Additions to "British Conchology" - *J. of Conch.* **15**: 87-89.
- NOFRONI, I., 1984. *Cyclostrema solutum* DI GERONIMO, 1974, larval shell of *Firolodia desmaresti* LESUEUR 1817 (Heteropoda: Pterotracheidae). - *La Conchiglia* **16** (186, 187): 23.
- WARÈN, A., 1980. Marine Mollusca described by John Gwyn Jeffreys, with the location of the type material. - *Conch. Soc. Gr. Britain: Ireland*, spec. publ. **1**: 1-60, pl. 1-8.
- WATSON, R.B., 1886. Report on the Scaphopoda and Gasteropoda collected by H.M.S. Challenger during the years 1873-76. - Reports on the scientific Results of the Challenger Expedition, *Zoology* **42**: 1-756.